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SEMERAL INFORMATION

The East Fork of Duck Creek Watershed is a long, north-abuth feather shaped area of 181 square miles, or 115,300 acres. 12 extends from Noble County south to Marietta on the Ohio River Vo 5,800 acres on the vestern side of the watershed extends into Monroe County. This wefershed Includes the East Fork of Duck Creek and Duck Creek which is formed by the union of East Fork and

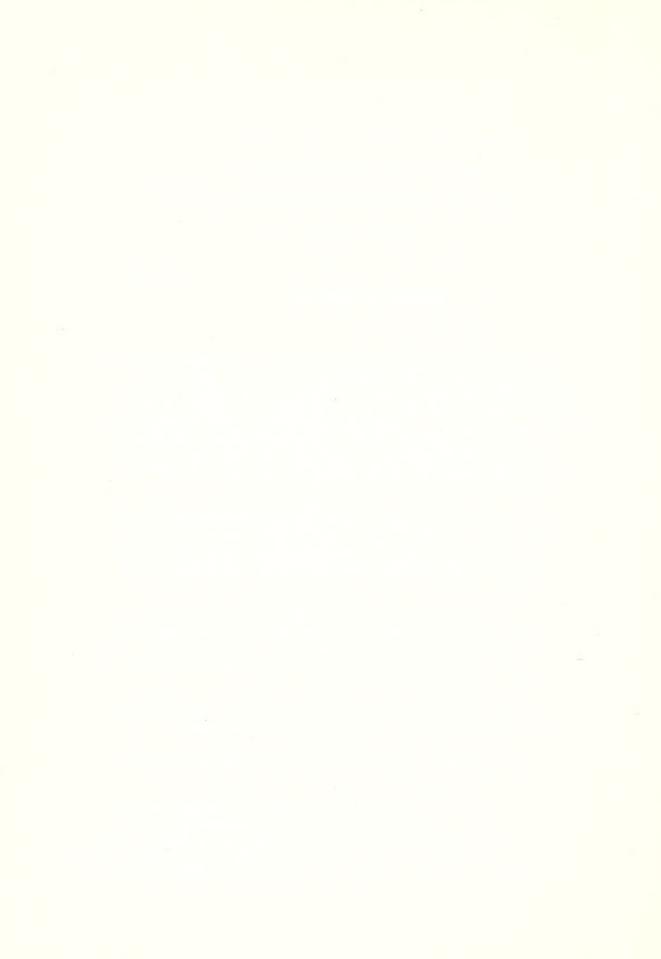
The villages of Whippie, Lower Salom, Harrieftsville, Staniage ville, Carlisle, and East Union are largely within the valley of Several other small villages are leseved in the upland eress of the

moor Whipple and East Fork Duck Creak main stem at lower Solam, U. S. Alternate Route 50 follows the Ohio River in the vicinity of Mariette croppes Duck Creek at Its cetlet. State Routes 78,145,260, 564, 565

The new interstate 77 which is appeared to replace U. S. 21 Ls under construction in upland areas of this watershed.

The Pennsylvenia Railroad Cossany operates a time along Duck Crook main sten.

The topography of the area is understaly steep, and can be conaldered that of a mature plateau, with numerous hills and valleys. County and the flood plain in Mariette is 550 feet. The stress parterm is dendritic and rock controlled with Duck Crack forming the



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meta atrosa, and Earl Fort, Aladie Fort and Physics Crack or largest tributaries.

The watershed lies in the unglaciated Alingham; Pickelly Beareck in transport emposures to expelly striked befores the older Pennsylvenian Numangahula Centation and younger Fermina Dankard Group. Both ruck groups censist of candaiotics, shalls, and coal. Cest is important seasonisally in the Menocophole, but only stationed airly mining is carried out in the Dunhard. See and oil have been recovered from elder rocks within the Weigrahad.

Soils in the area are those of the residual conditions and shale region of Ohio. The Muskingum-Spehur sells are found on the hills and slepes, and Huntington-Lindside-Whenling in the boffcmlands.

About 22% of the watershed is in cropland; 42% in pastures 22% in woodland; and 14% in other uses. A portion of the "other" uses is in strip mined land.

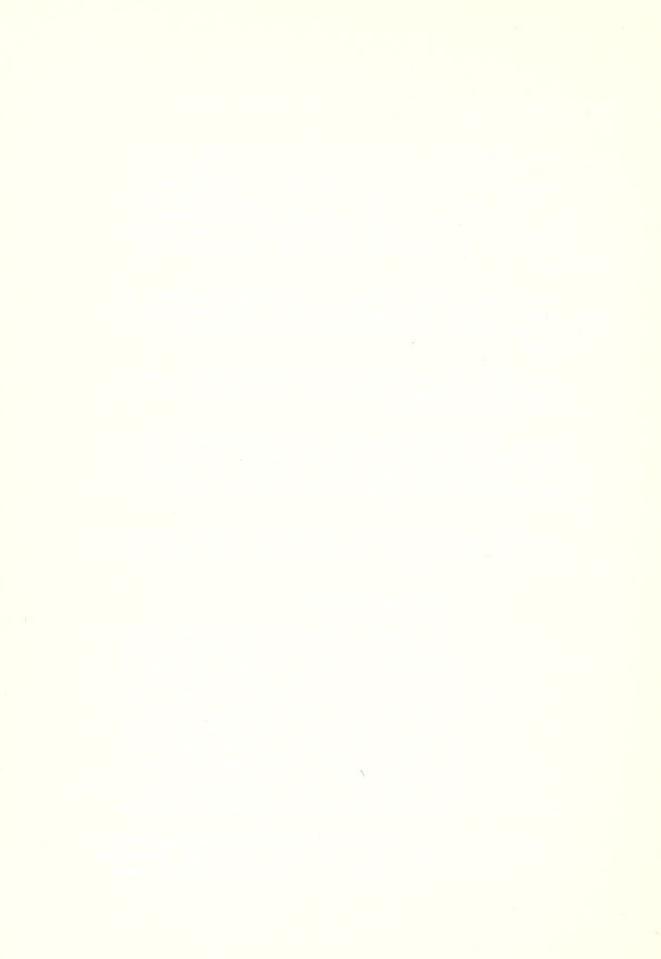
General type farming provails with a considerable perilich of the flood plain being used for crop production. Corn, grain, and meadow are the principal crops grawn. The sale of livestock and livestock products makes up the primary source of agricultural income.

Timbering, gas and oil, coal mining and related processing and transportation are the major industries other than agriculture in the area.

MATERIAGO PROGLEMS

Frequent flooding, causing damage to agricultural land, crops, roads, bridges, railroads, and villages, is the major problem in the East Fork of Duck Creek Watershed. The small villages of Lenor Salem, Harriettaville, Carlisle, and East Union experienced extension loades from recent floods of 1961, 1965, and 1965. Parts of these villages were supply any by early floods and have not been rebuilt. A child's life was lost in an early flood near East Union when a car became stalled in high mater. Several others were nearly lost in more recent instances. Asads and railroads are frequently closed due to highwater and damaged readbeds and bridges. Damages to 21 miles of reads and 6 miles of railroad were evaluated. Replacement cost sevings are expected to secrue on 17 bridges.

An estimated 3,600 acros are subjected to flooding, exactines abre often than once each year. The flooded area was determined by reaches using high water merks, survey data, U.S.G.S. tope-



graphic maps, field observations and interviews.

Existing channel capacities were derived using 41 channel cross sections surveyed during the Preliminary (nvestigation studies.

Average annual crop and pasture damages were determined by estimating values by months, by crops, and related frequency of flooding. Other agricultural damages and indirect damages were based on estimates resulting from interviews and observations compared with data from similar watersheds. Transperation and urban damages were estimated from data secured through correspondence with officials, interview, and projection of reliable information from other watersheds.

Summary of Annual Floodyster Damages Evaluated

Crop and Pasture Other Agricultural Roads, Bridges and Railroads Urban Indirect	\$ 38,401 4,812 32,157 5,168 9,947
Total	\$ 90,685

Floodwater demages to urban facilities evaluated for the 1963 flood in the several villages emounted to \$28,377. This damage occurred to 22 small businesses and public buildings and to 31 homes. Most of the businesses occur in Lower Salem. Curtailed services were not evaluated.

The villages of Lower Salem and Whipple are scutely in need of more water of better quality. Current sources are local wells and hauling from the Marietta area. The proposed structure site near Lower Salem on Pawpaw Creek is well located to provide opportunity to help meet this need for water supply.

There is no sizeable water impoundment in the watershed available for recreation at the present time.

PROJECT OBJECTIVES

The primary objective in this watershed is to reduce fleedwater damages to agricultural lands and crops, villages, and transportation facilities. Other objectives include: provision of water-based recreation; provision of municipal water supply; and central of erosion.



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The extent of floodstar design reduction plus the poterfiel benefits developed with project must topal or asseed the flood prevention costs of any proposed project. Lend transmit consisting of strip eropping, critical area planting, hay and posture planting and removation, graced waterways, discerdist, tile drainage, farm pends, and tree planting was considered partitions with any combination of structures. The pring program of the local Soil and Water Conservation Districts at the assistance of \$15.555 for a total land transmit cost of \$171,165.

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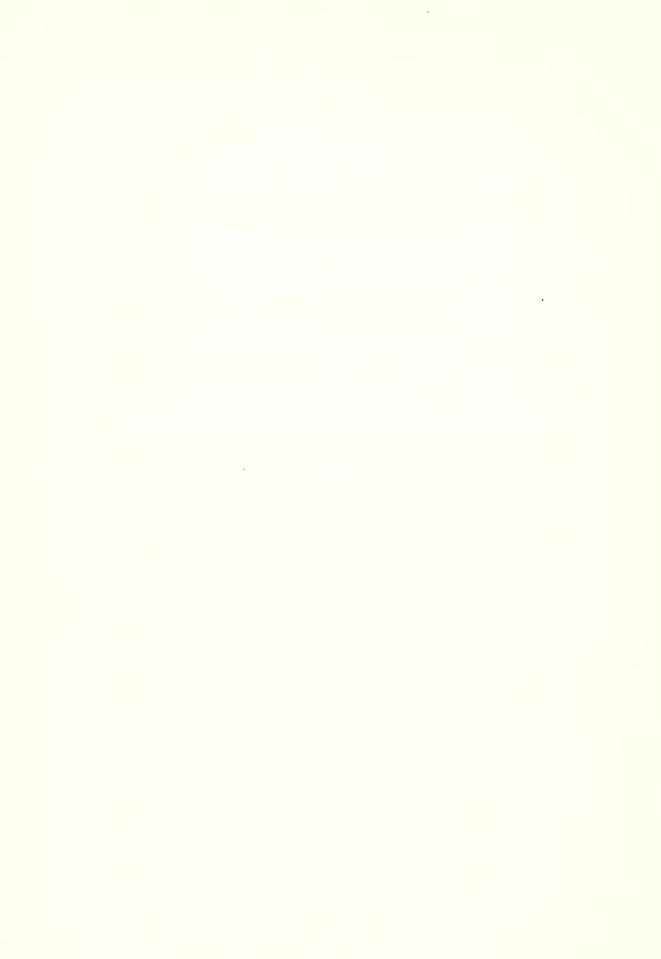
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See the table attached which allows the companions of parent to and costs separately for the more effective atmosfers office.



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EAST FORK DURC CAREM WITCHSAFD

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) 2 112	\$115,400	\$ 2, 123	\$ 110,025

Cost \$115,525

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EAST FORK DUCK CHEEK WATERSHED (Dollars)

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/ Includes Bridge Savings

3/ Includes \$25,224. for inclaim for plue 6.4% of recreation facilities.

January, 1956



